

REMARKS

In view of the above amendments and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Claims 1-20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner has pointed out that in claim 1, the limitation of “of which” does not clearly point out the preceding aspects of the claimed subject matter such as the rotary shaft, the flange or the circular section. Applicant has cancelled claim 1 and added new claim 21 which does not include the limitation “of which,” thereby obviating the Examiner’s rejection with respect to these claims.

Claim 1 was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner has pointed out that in claim 1, the use of “respectively” in the limitation “the radially inner and radially outer surface of the cavity being opposed to radially inner and radially outer surfaces, respectively, of the inertia mass” would require the opposing surfaces to be “one of the same” which is not supported by the specification. Applicant has cancelled claim 1 and has added new claim 21 which does not include the use of “respectively” and which clearly recites that the inertia mass and the cavity define two facing pairs of surfaces whose individual surfaces are not “one of the same.” Applicant believes that new claim 21 obviates the Examiner’s objection.

Moreover, since claim 21 satisfies the requirements of 35 U.S.C. 112, first paragraph, applicant respectfully requests that the limitation “said inertia mass and said cavity having relative dimensions to allow said inertia mass limited movement in rotation with respect to said cavity,” as recited in claim 21, be examined on the merits.

Claims 1-4 and 8-19 were rejected under 35 USC 103(a) as being unpatentable over Robbins et al. (US Patent 6,190,137) ("Robbins"). Claim 1 has been cancelled and new claim 21 added to more accurately define applicant's invention.

The structural limitations in claim 21, at lines 11 – 13, recite that the radially inner cylindrical surfaces of said inertia mass and of said cavity form a first facing pair of surfaces and that the radially outer cylindrical surfaces of said inertia mass and of said cavity forming a second facing pair of surfaces. The second facing pair of surfaces is shown in Figs. 1-3 as defining a space 24 at the radially outer portion of the cavity within a housing 16. The first facing pair of surfaces is shown in Figs. 1-3 as a space of constant width circumferentially at the inner radial portion of the cavity.

Claim 21 also recites, at lines 15 -17: "said inertia mass and said cavity having relative dimensions to allow said inertia mass limited movement in rotation with respect to said cavity" and "one of said facing pairs of surfaces constituting bearing surfaces guiding relative motion of said inertia mass, the other of said facing pairs of surfaces being spaced apart to define a space accommodating a displaceable material." These structural limitations are shown in Figs. 1-3 as the aforementioned space 24 having a maximum width that shifts from the left hand side of the outer radial portion of the cavity in Fig. 2 to the right hand side of the cavity in Fig. 3 as the inertia mass 20 rotates within the cavity along the first facing pair of surfaces functioning as bearing guiding surfaces.

Robbins fails to disclose or suggest those structural limitation necessary to provide for "said inertia mass and said cavity having relative dimensions to allow said inertia mass limited movement in rotation with respect to the cavity," as recited in claim 21. Specifically, Robbins fails to disclose or suggest (1) a housing connected to the outer surface of a flange, the housing

defining a cavity and an inertia mass within the cavity wherein the radially inner cylindrical surfaces of the inertia mass and of the cavity form a first facing pair of surfaces and the radially outer cylindrical surfaces of the inertia mass and of the cavity forming a second facing pair of surfaces; (2) one of the facing pairs of surfaces constituting bearing surfaces guiding relative motion of said inertia mass and the other of the facing pairs of surfaces being spaced apart to define a space accommodating a displaceable material; and (3) the inertia mass and the cavity having relative dimensions to allow said inertia mass limited movement in rotation with respect to the cavity.

Specifically, as shown in Fig. 5, Robbins discloses a flange 112 comprised of two solid core components 114 and 116 mounted around a rotary shaft 40. The outer wall 100 of the rotary shaft 40 and the inner wall 124 of the flange 112 define a section of open space. However, this section of open space does not disclose or suggest a cavity within a housing connected to the outer surface of the flange 112 containing an inertia mass. Moreover, while a single facing pair of surfaces is formed from the outer wall 100 of the rotary shaft 40 and the inner wall 124 of the flange 112, this single facing pair of surfaces does not disclose or suggest a either a first facing pair of surfaces formed from the radially inner cylindrical surfaces of an inertia mass and a cavity or a second pair of facing surfaces formed from the radially outer cylindrical surfaces of an inertia mass and a cavity as defined in applicant's invention. Therefore, Robbins does not disclose or suggest a housing connected to the outer surface of a flange, the housing defining a cavity and cavity containing an inertia mass wherein the radially inner cylindrical surfaces of the inertia mass and of the cavity form a first facing pair of surfaces and the radially outer cylindrical surfaces of the inertia mass and of the cavity forming a second facing pair of surfaces as recite in claim 21.

A discussed above, Robbins discloses a section of open space between the outer wall 100 of the rotary shaft 40 and the inner wall of the flange 112. However, this section of space can neither accommodate a displaceable material nor guide the relative rotation of an annular mass. The only other pair of facing surfaces disclosed in Robbins is comprised of the inner wall 124 and the outer wall 118 of the solid core flange 112 and as such cannot define either an annular space which accommodates a displaceable material or a pair of facing surfaces which guide the relative rotation of the annual inertia mass. Therefore, Robbins does not disclose or suggest one pair of facing surfaces constituting bearing surfaces guiding relative motion of an inertia mass and another pair of facing surfaces being spaced apart to define a space accommodating a displaceable material as recited in claim 21.

Finally, Robbins discloses a flange 112 comprised of a first solid core component 114 and a second solid core component 116. The inner surfaces of these solid core components define the inner surface 124 of the flange and, as such, are one of the same with the inner surface 124 of the flange 112. Therefore, Robbins does not disclose or suggest an inertia mass and a cavity having relative dimensions to allow said inertia mass limited movement in rotation with respect to the cavity as recited in claim 21.

Accordingly, Robbins fails to disclose or suggest all the specific structural features recited in claims 21. Therefore, applicant's claimed structure recited in claim 21 patentably distinguishes over Robbins.

Claim 20 discloses an elastomeric material, its inner surfaces connected to a pair of axially spaced and radially extending eccentric crankwebs and its outer surfaces connected to an annular inertia mass. As shown in Figure 6, Robbins et al. discloses a solid core flange 112

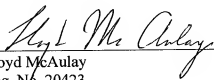
comprised of two metal components 114, 116, neither of which has any other material connected to its surfaces. Metal is not an elastomeric material. Therefore, Robbins et al. does not disclose or suggest the crankshaft disclosed in claim 20.

Accordingly, Robbins fails to disclose or suggest all the specific structural features recited in claims 19. Therefore, applicant's claimed structure recited in claim 20 patentably distinguishes over Robbins.

In conclusion, new claim 21 complies with 35 U.S.C. 112, first and second paragraphs, and, as such, applicant respectfully requests that all the limitations recited in claim 21, including "said inertia mass and said cavity having relative dimensions to allow said inertia mass limited movement in rotation with respect to said cavity," be examined on their merits. Moreover, applicant respectfully submits that Robbins does not disclose or suggest all the structural limitation recited in claim 21 and, as such, claim 21, and all claims dependent thereon, patentably distinguish over Robbins.

In light of the foregoing, reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,

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